Uwe Schnakenberg

List of Publications by Year
in descending order

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114	3,158	136950	182427
papers	citations	32 h-index	51 g-index

117	117	117	4427
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surface topography enhances differentiation of mesenchymal stem cells towards osteogenic and adipogenic lineages. Biomaterials, 2015, 61, 316-326.	11.4	336
2	Keratins as the main component for the mechanical integrity of keratinocytes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18513-18518.	7.1	183
3	Sputtered Iridium Oxide Films as Charge Injection Material for Functional Electrostimulation. Journal of the Electrochemical Society, 2004, 151, E226.	2.9	130
4	NH4Oh-based etchants for silicon micromachining. Sensors and Actuators A: Physical, 1990, 23, 1031-1035.	4.1	100
5	Microfluidic biolectorâ€”microfluidic bioprocess control in microtiter plates. Biotechnology and Bioengineering, 2010, 107, 497-505.	3.3	92
6	Properties of interdigital electrode arrays with different geometries. Analytica Chimica Acta, 1995, 305, 126-136.	5.4	69
7	Development of a Completely Encapsulated Intraocular Pressure Sensor. Ophthalmic Research, 2000, 32, 278-284.	1.9	65
8	Micro-bioreactors for fed-batch fermentations with integrated online monitoring and microfluidic devices. Biosensors and Bioelectronics, 2009, 24, 1411-1416.	10.1	62
9	Electrodeposition and properties of NiW films for MEMS application. Electrochimica Acta, 2005, 50, 5573-5580.	5.2	57
10	Substrate arrays of Iridium Oxide microelectrodes for in vitro neuronal interfacing. Frontiers in Neuroengineering, 2009, 3, 1.	4.8	56
11	Disorder in vitreous SiO2: The effect of thermal annealing on structural properties. Journal of Applied Physics, 1990, 68, 3532-3537.	2.5	55
12	Thermal Annealing Effects on the Mechanical Properties of Plasmaâ€Enhanced Chemical Vapor Deposited Silicon Oxide Films. Journal of the Electrochemical Society, 1992, 139, 1730-1735.	2.9	53
13	RF-sputtering of iridium oxide to be used as stimulation material in functional medical implants. Journal of Micromechanics and Microengineering, 2006, 16, S142-S148.	2.6	53
14	Hampering of the Stability of Gold Electrodes by Ferri-/Ferrocyanide Redox Couple Electrolytes during Electrochemical Impedance Spectroscopy. Analytical Chemistry, 2016, 88, 682-687.	6.5	53
15	Initial investigations on systems for measuring intraocular pressure. Sensors and Actuators A: Physical, 2000, 85, 287-291.	4.1	51
16	Surface enhanced infrared spectroscopy with gold strip gratings. Optics Express, 2013, 21, 9005.	3.4	51
17	Micro-transponder systems for medical applications. IEEE Transactions on Instrumentation and Measurement, 2001, 50, 1551-1555.	4.7	50
18	Determination of Young's modulus of electroplated nickel. Electrochimica Acta, 2003, 48, 3029-3035.	5.2	48

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19	Effect of sputtering parameters on surface morphology and catalytic efficiency of thin platinum films. Applied Surface Science, 2009, 255, 6479-6486.	6.1	48
20	Characterization of electroplated nickel. Microsystem Technologies, 2002, 9, 87-91.	2.0	47
21	Highly sensitive heavy metal analysis on platinum- and gold-ultramicroelectrode arrays. Electroanalysis, 1997, 9, 125-129.	2.9	46
22	Miniaturized Ion-Selective Chip Electrode for Sensor Application. Analytical Chemistry, 1997, 69, 4032-4038.	6.5	45
23	Neuronal cell growth on iridium oxide. Biomaterials, 2010, 31, 1055-1067.	11.4	44
24	Intravascular pressure monitoring system. Sensors and Actuators A: Physical, 2004, 110, 61-67.	4.1	40
25	Iridium oxide microelectrode arrays for in-vitro stimulation of individual rat neurons from dissociated cultures. Frontiers in Neuroengineering, 2009, 2, 16.	4.8	39
26	Stacked planar micro coils for single-sided NMR applications. Journal of Magnetic Resonance, 2013, 230, 176-185.	2.1	39
27	Optimization of platinum/iridium ratio in thin sputtered films for PEMFC cathodes. International Journal of Hydrogen Energy, 2012, 37, 7730-7735.	7.1	38
28	A fast telemetric pressure and temperature sensor system for medical applications. Journal of Micromechanics and Microengineering, 2007, 17, S98-S102.	2.6	37
29	Performance of laboratory polymer electrolyte membrane hydrogen generator with sputtered iridium oxide anode. Journal of Power Sources, 2008, 185, 1073-1078.	7.8	37
30	Preparation and properties of thin Ptâ€“Ir films deposited by dc magnetron co-sputtering. International Journal of Hydrogen Energy, 2011, 36, 15437-15445.	7.1	36
31	Highly sensitive electrochemical microsensensors using submicrometer electrode arrays. Sensors and Actuators B: Chemical, 1995, 27, 394-397.	7.8	35
32	Sputtered Ir Films Evaluated for Electrochemical Performance I. Experimental Results. Journal of the Electrochemical Society, 2008, 155, F61.	2.9	35
33	Reactively Sputtered Iridium Oxide. Journal of the Electrochemical Society, 2007, 154, F83.	2.9	32
34	Material characterisation of electroplated nickel structures for microsystem technology. Electrochimica Acta, 2001, 47, 55-60.	5.2	31
35	Electrical impedance spectroscopy of single cells in hydrodynamic traps. Sensors and Actuators B: Chemical, 2017, 248, 419-429.	7.8	31
36	A smart accelerometer with on-chip electronics fabricated by a commercial CMOS process. Sensors and Actuators A: Physical, 1992, 31, 121-124.	4.1	30

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37	NH4OH-based etchants for silicon micromachining: Influence of additives and stability of passivation layers. Sensors and Actuators A: Physical, 1990, 25, 1-7.	4.1	29
38	Evaluating the Thickness of Multivalent Glycopolymer Brushes for Lectin Binding. Macromolecular Rapid Communications, 2015, 36, 1472-1478.	3.9	29
39	Effects of Plectin Depletion on Keratin Network Dynamics and Organization. PLoS ONE, 2016, 11, e0149106.	2.5	29
40	Chemical microsensor systems for medical applications in catheters. Sensors and Actuators B: Chemical, 1995, 27, 471-473.	7.8	28
41	Chip-array electrodes for simultaneous stripping analysis of trace metals. Sensors and Actuators B: Chemical, 1995, 25, 899-903.	7.8	28
42	Transponder-based sensor for monitoring electrical properties of biological cell solutions. Journal of Bioscience and Bioengineering, 2005, 100, 172-177.	2.2	26
43	Deposition of sputtered iridium oxideâ€"Influence of oxygen flow in the reactor on the film properties. Applied Surface Science, 2006, 253, 1964-1969.	6.1	25
44	Flexible and Stretchable Gold Microstructures on Extra Soft Poly(dimethylsiloxane) Substrates. Advanced Materials, 2015, 27, 6664-6669.	21.0	25
45	Novel potentiometric silicon sensor for medical devices. Sensors and Actuators B: Chemical, 1996, 34, 476-480.	7.8	24
46	The metalloproteinase ADAM15 is upregulated by shear stress and promotes survival of endothelial cells. Journal of Molecular and Cellular Cardiology, 2019, 134, 51-61.	1.9	24
47	Theoretical calculations and performance results of a PZT thin film actuator. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 1240-1246.	3.0	23
48	Detecting endoleaks after endovascular AAA repair with a minimally invasive, implantable, telemetric pressure sensor: an in vitro study. European Radiology, 2007, 17, 2589-2597.	4.5	23
49	Simultaneous Electrochemical Impedance Spectroscopy and Localized Surface Plasmon Resonance in a Microfluidic Chip: New Insights into the Spatial Origin of the Signal. Analytical Chemistry, 2016, 88, 9590-9596.	6.5	22
50	Gold-supported magnetron sputtered Ir thin films as OER catalysts for cost-efficient water electrolysis. International Journal of Hydrogen Energy, 2018, 43, 16905-16912.	7.1	22
51	Focusing and Sorting of Particles in Spiral Microfluidic Channels. Procedia Engineering, 2011, 25, 1197-1200.	1.2	21
52	Miniaturized multi-coil arrays for functional planar imaging with a single-sided NMR sensor. Journal of Magnetic Resonance, 2015, 254, 10-18.	2.1	21
53	Lectin binding studies on a glycopolymer brush flow-through biosensor by localized surface plasmon resonance. Analytical and Bioanalytical Chemistry, 2016, 408, 5633-5640.	3.7	20
54	Fabrication of electrode arrays in the quarter micron regime for biotechnological applications. Sensors and Actuators A: Physical, 1995, 46, 66-70.	4.1	19

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55	Miniaturised ion-selective sensor chip for potassium measurement in a biomedical application. Sensors and Actuators B: Chemical, 1996, 34, 252-257.	7.8	19
56	Different Frequency of Cyclic Tensile Strain Relates to Anabolic/Catabolic Conditions Consistent with Immunohistochemical Staining Intensity in Tenocytes. International Journal of Molecular Sciences, 2020, 21, 1082.	4.1	19
57	Design of asynchronous dielectric micromotors. Journal of Electrostatics, 1994, 33, 159-185.	1.9	18
58	Sputtered platinumâ€“iridium layers as electrode material for functional electrostimulation. Thin Solid Films, 2011, 519, 3965-3970.	1.8	18
59	Influence of sputtering pressure on surface structure and oxygen reduction reaction catalytic activity of thin platinum films. Electrochimica Acta, 2010, 55, 8992-8997.	5.2	16
60	Real-time imaging system using a 12-MHz forward-looking catheter with single chip CMUT-on-CMOS array. , 2015, , .		16
61	Simultaneous optical and impedance analysis of single cells: A comparison of two microfluidic sensors with sheath flow focusing. Engineering in Life Sciences, 2015, 15, 286-296.	3.6	16
62	Numerical analysis and characterization of bionic valves for microfluidic PDMS-based systems. Journal of Micromechanics and Microengineering, 2007, 17, S122-S127.	2.6	15
63	Agarose-Based Substrate Modification Technique for Chemical and Physical Guiding of Neurons In Vitro. ACS Applied Materials & Interfaces, 2015, 7, 18769-18777.	8.0	15
64	A Miniaturized NMR-MOUSE with a High Magnetic Field Gradient (Mini-MOUSE). Applied Magnetic Resonance, 2015, 46, 181-202.	1.2	15
65	The spatial self-organization within pluripotent stem cell colonies is continued in detaching aggregates. Biomaterials, 2022, 282, 121389.	11.4	15
66	In situ Electrochemical Impedance Spectroscopy of Electrostatically Driven Selective Gold Nanoparticle Adsorption on Block Copolymer Lamellae. ACS Applied Materials & Interfaces, 2016, 8, 27282-27290.	8.0	14
67	In Situ Monitoring of Membrane Protein Insertion into Block Copolymer Vesicle Membranes and Their Spreading via Potential-Assisted Approach. ACS Applied Materials & Interfaces, 2019, 11, 29276-29289.	8.0	13
68	Multi electron beam lithography: Fabrication of a control unit. Microelectronic Engineering, 1989, 9, 205-208.	2.4	12
69	Development of a four electrode sensor array for impedance spectroscopy in high content screenings of fermentation processes. Sensors and Actuators B: Chemical, 2010, 147, 93-99.	7.8	12
70	Dielectric induction micromotors: Field levitation and torque-frequency characteristics. Sensors and Actuators A: Physical, 1992, 32, 525-530.	4.1	11
71	Micro-springs for temporary chip connections. Sensors and Actuators A: Physical, 2000, 85, 371-376.	4.1	11
72	Microfluidic Irreversible Electroporationâ€”A Versatile Tool to Extract Intracellular Contents of Bacteria and Yeast. Metabolites, 2019, 9, 211.	2.9	11

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73	Dry Film Resist Laminated Microfluidic System for Electrical Impedance Measurements. Micromachines, 2021, 12, 632.	2.9	11
74	Long-term stability of PDMS-based microfluidic systems used for biocatalytic reactions. Journal of Micromechanics and Microengineering, 2006, 16, 2425-2428.	2.6	10
75	A monolithically fabricated flexible resonant circuit for catheter tracking in magnetic resonance imagingâˆ†. Sensors and Actuators B: Chemical, 2010, 144, 432-436.	7.8	10
76	Single Interdigital Transducer Approach for Gravimetrical SAW Sensor Applications in Liquid Environments. Sensors, 2017, 17, 2931.	3.8	10
77	Role of Substrate Surface Morphology on the Performance of Graphene Inks for Flexible Electronics. ACS Applied Electronic Materials, 2019, 1, 1909-1916.	4.3	10
78	PortaDrop: A portable digital microfluidic platform providing versatile opportunities for Lab-On-A-Chip applications. PLoS ONE, 2020, 15, e0238581.	2.5	10
79	Low density cell culture of locust neurons in closed-channel microfluidic devices. Journal of Insect Physiology, 2010, 56, 1003-1009.	2.0	9
80	Fluid transport via pneumatically actuated waves on a ciliated wall. Journal of Micromechanics and Microengineering, 2015, 25, 125009.	2.6	9
81	Six-layer lamination of a new dry film negative-tone photoresist for fabricating complex 3D microfluidic devices. Microfluidics and Nanofluidics, 2017, 21, 1.	2.2	9
82	Microelectrode Combinations of Gold and Polypyrrole Enable Highly Stable Twoâ€electrode Electrochemical Impedance Spectroscopy Measurements under Turbulent Flow Conditions. Electroanalysis, 2021, 33, 197-207.	2.9	9
83	Electrochemical Impedance Spectroscopy Biosensor Enabling Kinetic Monitoring of Fucosyltransferase Activity. ACS Sensors, 2021, 6, 1003-1011.	7.8	9
84	Platform for Temporary Testing of Hybrid Microsystems at High Frequencies. Journal of Microelectromechanical Systems, 2007, 16, 1367-1377.	2.5	8
85	Sputtered Ir Films Evaluated for Electrochemical Performance II. Simulations. Journal of the Electrochemical Society, 2008, 155, F66.	2.9	8
86	Simulations and study of electrochemical hydrogen energy conversion in EasyTest Cell. Electrochimica Acta, 2009, 54, 1269-1276.	5.2	7
87	Electrochemical Impedance Spectroscopy Using Interdigitated Goldâ€“Polypyrrole Electrode Combination. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900827.	1.8	7
88	New cryoelectronic detector concept based on twoâ€dimensional heat diffusion. Journal of Applied Physics, 1993, 73, 2659-2666.	2.5	5
89	Experimental validation of the â€œEasyTest Cellâ€•operational principle for autonomous MEA characterization. International Journal of Hydrogen Energy, 2010, 35, 2428-2435.	7.1	5
90	FhuAâ€“Grubbsâ€“Hoveyda Biohybrid Catalyst Embedded in a Polymer Film Enables Catalysis in Neat Substrates. ACS Catalysis, 2020, 10, 10946-10953.	11.2	5

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91	Passivation of magnetic material used in cell culture environment. Sensors and Actuators B: Chemical, 2016, 236, 85-90.	7.8	4
92	One-port portable SAW sensor system. Measurement Science and Technology, 2018, 29, 015107.	2.6	4
93	Stretchable electrical cell-substrate impedance sensor platform for monitoring cell monolayers under strain. Sensors and Actuators B: Chemical, 2021, 336, 129656.	7.8	4
94	Multi-Beam Concepts for Nanometer Devices. Japanese Journal of Applied Physics, 1989, 28, 2058-2064.	1.5	3
95	Lithography with high depth of focus by an ion projection system. Journal of Microelectromechanical Systems, 1992, 1, 116-120.	2.5	3
96	Superconducting Nb/AlOX/Nb tunnel junctions on micromachined silicon substrates. Journal of Low Temperature Physics, 1993, 93, 617-622.	1.4	3
97	Plasmonic flow-through biosensor using a polymeric substrate. Journal of Micromechanics and Microengineering, 2014, 24, 034001.	2.6	3
98	Microfluidic-Based Electrical Impedance Spectroscopy System Using Multilevel Lamination of Dry Film Photoresist. , 2021, , .		3
99	Iridium sputtered at varying pressures and target-substrate-distances evaluated for use as stimulation electrode material. , 2006, 2006, 3353-6.		2
100	Sputtered Iridium Oxide for Stimulation Electrode Coatings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6048-51.	0.5	2
101	Telemetric Catheter-Based Pressure Sensor for Hemodynamic Monitoring: Experimental Experience. CardioVascular and Interventional Radiology, 2009, 32, 714-719.	2.0	2
102	SIROF stimulation electrode evaluation using the pulseâ€“clamp method. Procedia Chemistry, 2009, 1, 269-272.	0.7	2
103	Microfluidic system for cell fusion. Procedia Engineering, 2010, 5, 1332-1335.	1.2	2
104	Multilayer Micro Coils for Thin Film Analysis with Mobile NMR Arrays. Procedia Engineering, 2011, 25, 395-398.	1.2	2
105	Pulse-clamp method applied to SIROF stimulation electrodes. Sensors and Actuators B: Chemical, 2011, 154, 150-154.	7.8	2
106	A new microfluidic device design for a defined positioning of neurons in vitro. Biomicrofluidics, 2017, 11, 044103.	2.4	2
107	Electrochemical Properties and Applications of Sputtered Iridium Oxide Thin Films. , 2006, , 729-735.		1
108	Pulse-clamp technique for single neuron stimulation electrode characterization. , 2009, 2009, 1635-8.		1

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109	Portable SAW Impedance Sensor Using a 1-Port Resonator Approach. Proceedings (mdpi), 2017, 1, .	0.2	1
110	Characterization of transient rheological behavior of soft materials using ferrofluid droplets. Sensors and Actuators A: Physical, 2022, 344, 113756.	4.1	1
111	Micro Structured Planar Gradient Coils for Low Field Magnetic Resonance Imaging. , 2007, , .		0
112	Super-selective electrical stimulation of the left ventricle via a miniaturized magnetized stimulation wire: proof of concept study. Biomedizinische Technik, 2010, 55, 285-290.	0.8	0
113	3-Dimensional fluid flow profile on a structured PDMS surface. , 2017, , .		0
114	Iridium sputtered at varying pressures and target-substrate-distances evaluated for use as stimulation electrode material. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0